Pergamon

Vision Res. Vol. 35, Suppl., pp. S51–S245, 1995

0042-6989(95) $9.50 + 0.00

CORNEA: PHOTOREFRACTIVE SURGERY A

1111

RISK FACTOR ANALYSIS FOR POOR VISUAL OUTCOME FOLLOWING PRK

M. Assouline, F. Mayer, J. Moossavi, T. David, JJ. Saragoussi, A. Abenhaim, Y. Pouliquen
Department of Ophthalmology, Hôtel-Dieu de Paris (France)

Purpose: To investigate the factor determining a poor final visual outcome following photorefractive keratoplasty (PRK).
Methods: The charts of 800 eyes included in the prospective evaluation of Summit Excimed and Omnimed excimer lasers were retrospectively reviewed. All cases with final uncorrected visual acuity less than 20/40 and/or loss of best corrected visual acuity equal or greater than 2 lines were analyzed.
Results: Final uncorrected and corrected visual acuity were correlated to inclusion number, age, preoperative degree of myopia, preoperative degree and nature of astigmatism, preoperative surface irregularity, ablation zone diameter, decentration, degree of overcorrection at 1 month, degree of haze at 3 months, central island at 3 months, residual astigmatism, and use of corticosteroid.
Conclusion: These results suggests that preoperative astigmatism greater than 1.5 diopter, age greater than 40 and decentration greater than 1.5 mm may limit uncorrected vision level following PRK.

1112

PHOTOREFRACTIVE KERATECTOMY (PRK) FOR LOW TO MODERATE MYOPIA WITH A 5MM OPTICAL ZONE: TWO YEARS FOLLOW-UP

DAVID.T., SARAGOUSSI J.J., ABENHAÏM A., OTHENIN-GIRARD P., ASSOULINE M., RENARD G., POULIQUEN Y.
Department of Ophthalmology, Hôtel-Dieu, Paris, France

Purpose: To evaluate long term efficacy, safety and stability of PRK for low and moderate myopia.
Methods: 110 patients were treated for myopia up to 6D with the Summit Excimed excimer laser. The optical zone was 5mm in all cases. Manifest refraction, refraction under cycloplegia, corneal haze and corneal topography were studied at D15, 1, 3, 6, 12, and 24 months after the surgery.
Results: 110 patients completed all examinations up to 1 year. 58 patients were studied up to 2 years. The refractive results were very good: 0+/-0.4D at one year and -0.05+/-0.4D at 2 years for manifest refraction, and 0.37+/-0.8 at one year and 0.25+/-0.7 at 2 years for refraction under cycloplegia. Corneal haze diminished with time up to 2 years (0.24+/-0.4 at one year and 0.12+/-0.3 at 2 years). There were no statistically significant differences between one and 2 years results regarding refraction, uncorrected visual acuity and best corrected visual acuity among the 58 patients seen at 1 and 2 years after the treatment, although some late regression was seen in very few eyes.
Conclusion: The refractive results of PRK appear stable between 1 and 2 years after surgery for low myopia. Corneal clarity still improves with time between one and 2 years after the treatment.

1113

CLINICAL RESULTS OF PHOTOREFRACTIVE KERATECTOMY BY EXCIMER LASER TREATMENT.

(J.L. FEBBRARO[1], D. BREMOND-GIGNAC[2]; B. ARON [1]; K. DIERYCK[1]; D. ARON-ROSA[1])
Dept. of Ophthalmology, Rotschild Foundation, Paris, France[1]; Dept. of Ophthalmology, Robert Debré Hospital, Paris, France[2] .

PURPOSE. To evaluate the efficacity, predictability and safety of phororefractive keratectomy by excimer laser for low, moderate and high myopias. **METHODS**. The excimer laser used in this study was the visx 20/20 from Visx inc. 108 patients were operated for myopia from -1D to -14,5 D. multiple zones corneal ablation was performed for moderate and high myopias.Topical non steroid anti-inflamatory treatment was systematically used for six months while corticoids were administrated only in case of quick regression or intense haze. Datas of 70 eyes were clinically and statistically evaluated in terms of safety, efficacity and predictibility over a six months follow up period. **RESULTS**. Results are reported globally and for subgroups of myopia (group A:SE ≤ 3 D; group B: -3 D < SE≤ -7 D ; group C: SE >-7 D.) One month after the treatment, 25% of cases were at 10/10 and 75% were ≥ 5/10. at six months, 64% were ≥ 5/10; in group A 93% were ≥ 5/10, in group B77% were ≥ 5/10, and in group C, 35% of the cases were ≥ 5/10. Predictability was satisfactory in particular in groups A and B (mean deviation: -0,5 d) while in group C, the mean deviation was higher (-1,7 D). stability is better in patients who originally had a low or moderate moderate myopia. Safety of the treatment was satisfactory; grade of corneal opacity was generally mild and decreasing slightly over the six months, excepted for two patients with moderate persistant haze. **CONCLUSIONS**. The photorefractive keratectomy with visx 20/20 was clinically effective in the treatment of myopia. The results show that this technique is effective, predictable and safe for low and moderate myopias. However, the corrective effect and predictibility are less accurate in high myopias.
NONE

1114

LONG TERM REFRACTIVE RESULTS OF A 3 MONTH TREATMENT WITH DEXAMETHASONE AFTER PHOTOREFRACTIVE KERATECTOMY (PRK) FOR MYOPIA: A RANDOMIZED PROSPECTIVE STUDY

DAVID.T., SARAGOUSSI J.J., ABENHAÏM A., OTHENIN-GIRARD P., ASSOULINE M., RENARD G., POULIQUEN Y.
Department of Ophthalmology, Hôtel-Dieu, Paris, France

Purpose: To evaluate the long term refractive effects of a 3 month treatment with dexamethasone after PRK
Methods: 50 patients (mean age 29) have been treated with the Summit Excimed laser for myopia up to 6D. For each patient, one eye (first or second, randomly determined), has been treated 3 months with dexamethasone, the other eye did not received any treatment. Manifest refraction, refraction under cycloplegia, corneal topography have been studied at D15, 1, 3, 6 and 12 months by a masked observer.
Results: There was no difference between the two groups regarding preoperative myopia (-3.9+/-1.53D and -3.89+/- 1.51D). The refractive results were excellent in both groups.There was a statistically significant difference between treated and non treated eyes for cycloplegic refraction up to 12 months ($p<0.01$), with treated eyes beeing more corrected (and sometimes more overcorrected). At one year, the difference for manifest refraction was almost significant ($p=0.056$). Corneal haze was slightly reduced in the treated eyes up to 6 months, but there were no more difference at one year between the two groups.
Conclusions: A 3 month treatment with Dexamethasone can have an influence on long term refractive results after PRK for myopia